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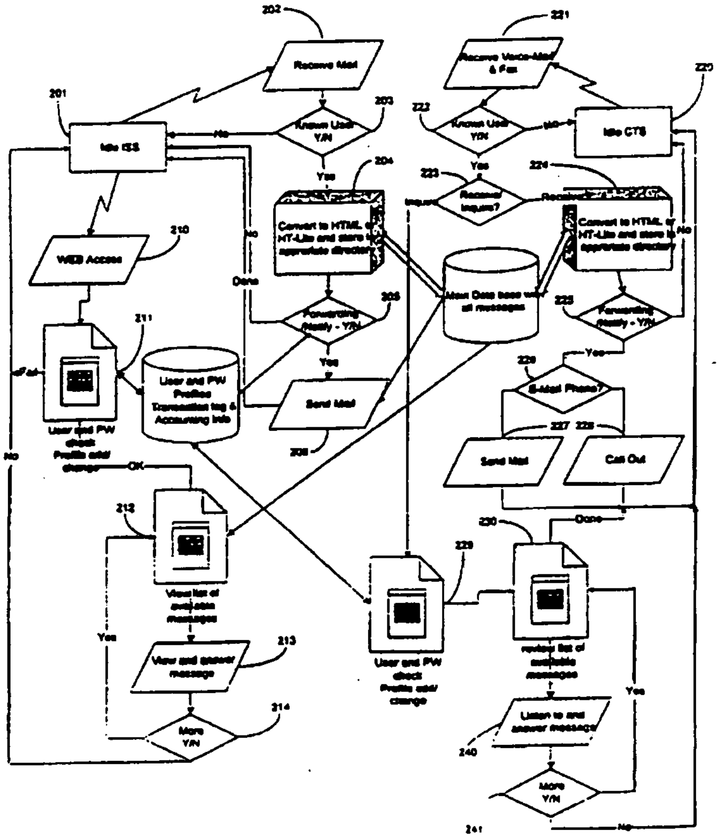
(54) Title: INTEGRATED SERVICES ON INTRANET AND INTERNET

(57) Abstract

A web server system for delivering e-mail messages and other forms of digital documents converts incoming documents into Hypertext Markup Language (204) and stores them in an indexed database comprising directories and subdirectories. As requests are received (223) from users, HTML documents are retrieved from the directories and transmitted directly to the users with no need for conversion to another format. In a preferred embodiment directories are assigned to users and a user accesses a WEB page on the server to access digital documents. Attachments in this embodiment are related by hyperlinks.



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Integrated Services on IntraNet and Internet

Field of the Invention

The present invention is in the area of multimedia document handling and cross-media access of such documents based both on Internet, Intranet and Telephony networks.

Cross Reference to related Applications

This disclosure is related to patent application 08/629,475 by the same inventor.

Background of the Invention

Today many different electronic services are available for communication. Such services include, but are not necessarily limited to voice-mail, e-mail, paging, alpha paging, cellular phones, paging phones, fax machines and so forth. There are also cross-linked services available, such as paging on digital cell phones, and the like. In general, however, each type of media is limited to one access, usually in very primitive manner.

Recently Motorola announced e-mail on cellular telephones: To use this service, a user calls a special number, and the saved e-mail is read over the phone to the user. Such a service may be helpful in some cases, while not be very helpful in others. If , for example, a spreadsheet is attached, the spreadsheet cannot be read over the phone. Even if a spreadsheet could be converted, reading potentially hundreds of numbers over the phone will most likely result in several transcription errors, rendering the result basically useless.

What is needed arc better devices and better methods, crossing traditional media boundaries.

One simple way to offer integrated services is to use a database on a server that is connected to the World Wide Web (WWW) Then, when data is requested, that data is called by invoking a so-called CGI-application (these are applications that are launched by a web page). The CGI application then sorts out data, and presents the result as a dynamically-built web page. During a Comdex show on about November 14, 1995 Lotus, Inc. announced such a program for their Notes product. This addition allows users to read Notes. Others have followed since.

The problem remaining with such solutions is that most of them are proprietary and also slow, meaning that only a very limited number of users can be serviced concurrently by one server. This is partly because a CGI application has to be launched for every request, invoking a database inquiry, which in all cases consumes substantial computer power and time.

Summary of the Invention

In a preferred embodiment of the present invention a web-server system for processing and providing digital documents, comprising: a receiver-converter for receiving digital documents and converting the digital documents to Hyper Text Markup Language (HTML) format; a directory structure providing a database; and an index listing the contents of the database by directory structure. Upon receipt of a digital document, the receiver-converter converts the digital document into HTML format and stores it in the directory structure, and updates the index. In some embodiments the system further comprises an access program wherein database directories are assigned to individual users and displayed as web pages. In this embodiment attachments to incoming e-mail are related to stored mail as hyperlinks to the web page.

A method is provided comprising steps of (a) making a database on a server composed of directories assigned to users; (b) receiving digital documents at the server; (c) converting the digital documents to Hypertext Markup Language (HTML) format; and (d) storing the HTML digital documents in the directories. In some embodiments the method further comprises steps for: (e) receiving a request from a

user; (f) retrieving a document from the database in HTML format; and (g) transmitting the document to the user over the Internet.

In various embodiments, assuming servers of relatively equal computing power, by using a directory structure instead of an integrated database, and pre-converting documents to HTML format prior to storing for later retrieval by a user, more users can be served at a faster pace than can be served in conventional systems.

Brief Description of the Drawing Figures

Fig. 1 is a generalized topology example showing arrangement and connectivity of equipment in an embodiment of the present invention.

Fig. 2 is a flowchart illustrating processes and operations in practicing embodiments of the present invention.

Description of the Preferred Embodiments

The present invention in various embodiments differs from the prior art in that a database is not used, as described above in the Background section. When a database is used with the Internet (WWW), once data is extracted, it must be converted to HTML (Hyper Text Markup Language) before the data can be transmitted on the Internet. This is typically done as a function of the CGI application called. Instead, in embodiments of the present invention, the digital documents (mails) are as HTML files in a directory structure representing the database. In addition, in some embodiments, even the index is kept in a HTML file, and the index is continuously updated as messages come in.

In an alternative embodiment small downloadable modules, in technologies such as JAVA or similar, are provided on a server connected to the WWW. A user first downloads the HTML index and a small application to handle it, then executes actual index searches on the user machine. Once a file or files are located in the index a request is set over the Internet to access the file or files from the server

In one embodiment the existing "Send Mail of the UNIX operating system on a server is modified in a way that incoming mail is converted into HTML files, and then stored in appropriate pre-arranged directories. An index file is then updated. If the incoming mail has attachments, they are stored in the same directory and can have a hyperlink from the mail page. A user may then either view or download the attachment(s).

Additional functions, such as address book, sending mail etc. are provided in embodiments of the invention by using a Java applet having a relatively small user interface. The applet can directly access files containing addresses and insert them into messages and so forth.

In some embodiments of the invention, to facilitate adding of addresses, the addresses can be marked as well on the message, and by clicking on the addresses a user can cause the addresses to be transferred into the list. The address list also contains, in some embodiments, phone numbers and addresses (snail mail), that can be launched into other applications such as a phone dialer. This feature is very attractive in conjunction with such things as voice-mail, video-mail etc. Players and auxiliary tools may be launched to connect a user with a calling party, or to allow a user to leave voice-mail and or video-mail messages.

On the receiving send, where a user is using a system according to an embodiment of the present invention, voice-mail and video-mail are converted when received into one or several 'standard' formats, so that when the user wants to view it, no long delays are incurred. Without this feature a user may have to launch a CGI-controlled search through a database, followed by on-the-fly conversion, which can consume a substantial amount of CPU power.

In embodiments of the present invention all files are prepared when arriving, such that the user when checking, can just browse. By using an HTTPS server, security is provided by standards already established on the Internet. This feature allows more users on a single server, which ultimately reduces costs dramatically.

In an ideal setup, the user can go to a web-page, and open his own account all by himself, since only name, password and credit card (or some other form of payment) are needed. There are no IP addresses etc. to worry about. Additionally, The user may also open up his own web page much like the same web-page referred to

above, and then upload through a secure HTTPS transaction new pages that he created on his own system.

It will be apparent to those with skill in the art that there are many alterations that might be made in the embodiments described without departing from the spirit and scope of the invention. For example, there are many ways directory structures may be provided and many ways individual programmers might furnish code to accomplish the modules of the invention. There are similarly many sorts of platforms and data links that may be used in practicing embodiments of the invention. The invention is limited in scope only by the claims which follow.

What is claimed is:

1. A web-server system for processing and providing digital documents, comprising:

   a receiver-converter for receiving digital documents and converting the digital documents to Hyper Text Markup Language (HTML) format;

   a directory structure providing a database; and

   an index listing the contents of the database by directory structure;

   wherein, upon receipt of a digital document, the receiver-converter converts the digital document into HTML format and stores it in the directory structure, and updates the index.

2. A web-server system as in claim 1 further comprising an access program wherein database directories are assigned to individual users and displayed as web pages.

3. A web-server system as in claim 1 wherein attachments in incoming e-mail are related to stored mail as hyperlinks to the web page.

4. A method for providing integrated digital document services to users, comprising steps of:
   (a) making a database on a server composed of directories assigned to users;
   (b) receiving digital documents at the server;
   (c) converting the digital documents to Hypertext Markup Language (HTML) format; and
   (d) storing the HTML digital documents in the directories.

5. The method of claim 4 further comprising steps for:
   (e) receiving a request from a user;
   (f) retrieving a document from the database in HTML format; ad
   (g) transmitting the document to the user over the Internet.

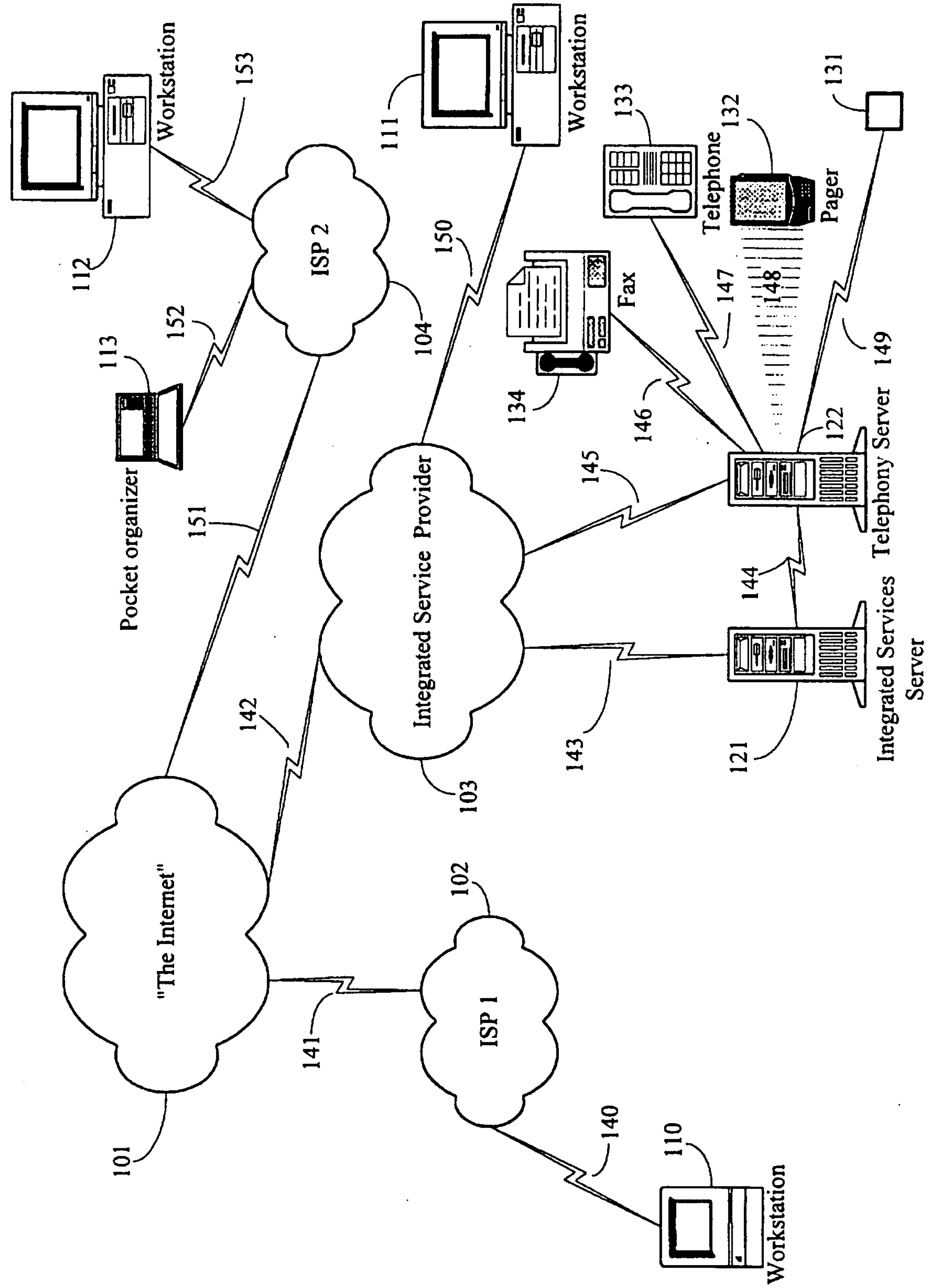

Fig. 1 - Topology Example

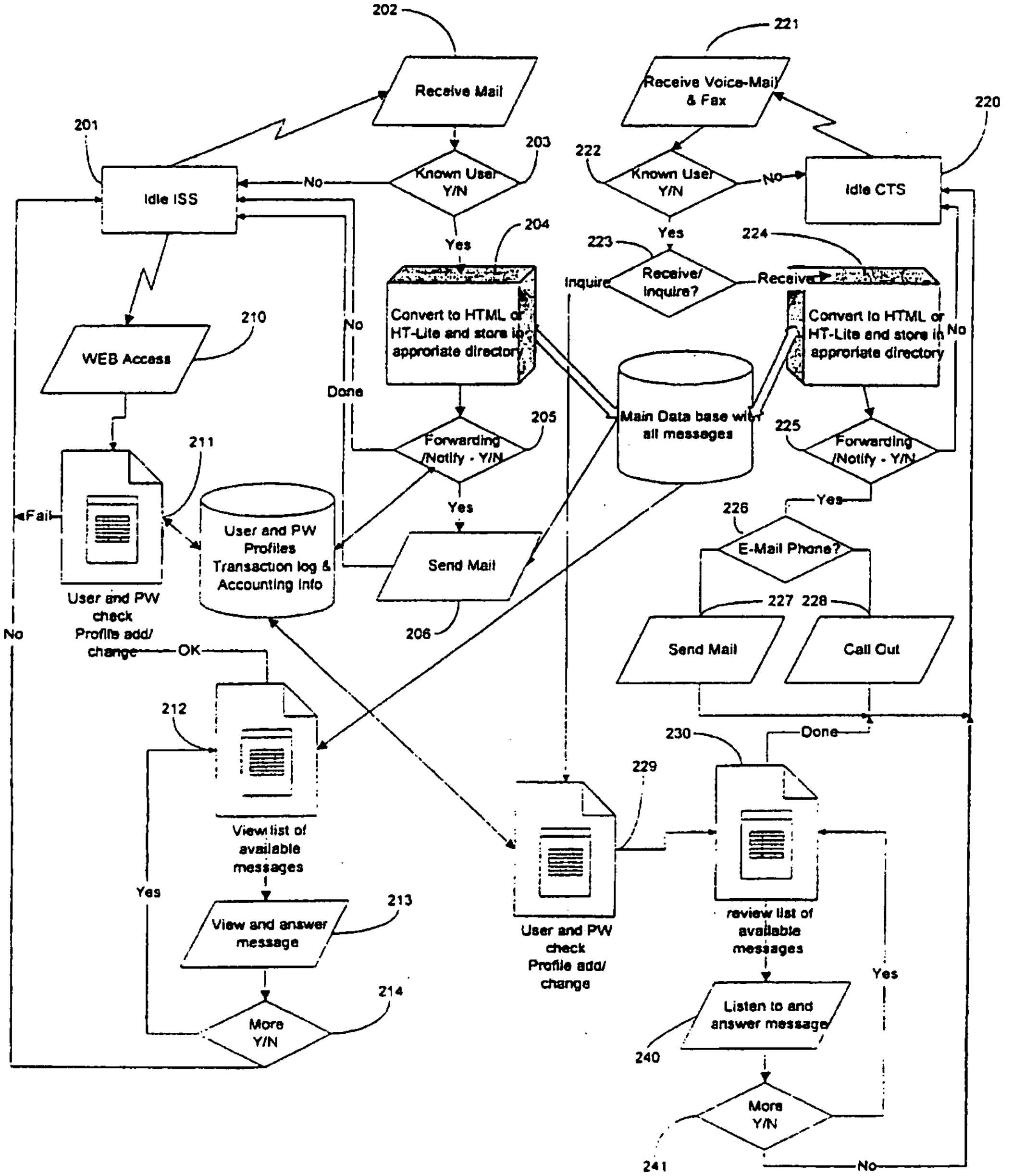
202
Receive Mail
201
Idle ISS
203
Known User Y/N
No
Yes
204
Convert to HTML or HT-Lite and store in approriate directory
No
Done
205
Forwarding /Notify - Y/N
Yes
Send Mail
206
210
WEB Access
211
Fail
User and PW check Profile add/ change
OK
User and PW Profiles Transaction log & Accounting Info
No
212
View list of available messages
Yes
View and answer message
213
More Y/N
214
221
Receive Voice-Mail & Fax
220
222
Known User Y/N
No
Idle CTS
Yes
223
Receive/ Inquire?
Inquire
Receive
224
Convert to HTML or HT-Lite and store in approriate directory
No
Main Data base with all messages
225
Forwarding /Notify - Y/N
Yes
226
E-Mail Phone?
227
228
Send Mail
Call Out
230
Done
229
User and PW check Profile add/ change
review list of available messages
Yes
Listen to and answer message
240
More Y/N
241
No

Fig. 2

INTERNATIONAL SEARCH REPORT

International application No.
PCT/US97/12628

A. CLASSIFICATION OF SUBJECT MATTER

IPC(6) :G06F 17/40
US CL :395/774
According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 395/774,762, 610; 358/402, 403

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

IEEE CD-ROM, Computer Select 1995-1996 CD-ROM, APS

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X,P	US 5,649,186 A (FERGUSON) 15 JULY 1997 (15.7.97) SEE ABSTRACT	1-5
Y,E	US 5,654,886 A (ZERESKI ET AL.) 05 AUGUST 1997 (5.8.97) SEE ABSTRACT	1-5
Y,P	US 5,627,997 A (PEARSON ET AL.) 06 MAY 1997 (6.5.97) SEE ABSTRACT	1-5
Y,P	US 5,623,589 A (NEEDHAM ET AL.) 22 APRIL 1997 (22.4.97) SEE ABSTRACT	1-5
Y,P	US 5,608,874 A (OGAWA ET AL.) 04 MARCH 1997 (4.3.97) SEE ABSTRACT	1-5
Y,P	US 5,608,446 A (CARR ET AL.) 04 MARCH 1997 (4.3.97) SEE ABSTRACT	1-5

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

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Date of the actual completion of the international search

26 AUGUST 1997

Date of mailing of the international search report

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US97/12628

C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y,P	US 5,577,108 A (MANKOVITZ) 19 NOVEMBER 1996 (19.11.96) SEE ABSTRACT	1-5
Y,P	US 5,553,281 A (BROWN ET AL.) 03 SEPTEMBER 1996 (3.9.96) SEE ABSTRACT	1-5
Y	US 5,530,852 A (MESKE JR. ET AL.) 25 JUNE 1996 (25.6.96) SEE ABSTRACT	1-5
Y	US 5,406,557 A (BAUDOIN) 11 APRIL 1995 (11.4.95) SEE ABSTRACT	1-5
Y	KIKUCHI ET AL., USER INTERFACE FOR A DIGITAL LIBRARY TO SUPPORT CONSTRUCTION OF A VIRTUAL PERSONAL LIBRARY, PROCEEDINGS OF THE INTERNATIONAL CONFERENCE ON MULTIMEDIA COMPUTING AND SYSTEMS, 17 JUNE 1996, P. 429-432 , SEE P.429	1-5
Y	WILKINSON, HARMONIC CONVERGENCE, PC WEEK, 11 MARCH 1996, V.13,N.10,P.15-16, SEE P. 15	1-5
Y	CROTTY, NETSCAPE NAVIGATOR SHATTERS STATIC WEB PAGES, MACWORLD, DECEMBER 1995, V.12, N.12, P.34-35, SEE P. 34	1-5
Y	SEMILOF, PROTOTYPE E-MAIL WARE DRAWS MIXED REVIEWS, COMMUNICATIONSWEEK, 17 APRIL 1995, N.553, P. 15, SEE P. 15	1-5

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SYSTEM AND METHOD OF A WEB BROWSER WITH INTEGRATED FEATURES AND CONTROLS

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Scott Jaroll
David Redkey

BACKGROUND

Field of the invention

The present invention relates generally to a web browser and methods thereof and more specifically to a web browser integrated with, for example, mail, chat and/or search functions having embedded content filtering and methods thereof.

Description of Related Art

Information made available through the Internet in the form of Web Sites, Chat Rooms and Electronic Mail, is generally unregulated. Internet Directory Services and Search Engines such as Yahoo®, HotBot® and others can provide order to the subject matter of the vast amount of information available. However Directory Servers are generally limited to categorizing Web Sites based on Keywords supplied by the site's content provider. Actual content is generally not verified. Internet Search Engines typically provide results by matching the same Keywords to a specific user query to generate a list of

JC571 U.S. PTO
06/02/99

A/PROV

PTO/SB/16 (11-95)
Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

PROVISIONAL APPLICATION FOR PATENT COVER SHEET

This is a request for filing a PROVISIONAL APPLICATION FOR PATENT under 37 CFR 1.53 (b)(2) & 1.51(a)(2)(i).

Docket No. 1154		Type a plus sign (+) inside this box ->	+

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Jaroll	Scott		East Palo Alto, California
Redkey	David		Santa Clara, California

JC541 U.S. PTO
60/137269
06/02/99

TITLE OF INVENTION (280 characters max)

SYSTEM AND METHOD OF A WEB BROWSER WITH INTEGRATED FEATURES AND CONTROLS

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[X] No.
[ ] Yes, the name of the U.S. Government agency and the Government contract member are: ____________

Respectfully submitted,
Fabrice Chupin et al.

Date: 6/2/99

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[ ] Additional inventors are being named on separately numbered sheets attached hereto.

matches for each specific query. Again, actual content of the matches is generally not checked. For some users, for example children, such unregulated access is undesirable. In addition, some young users have difficulty in navigating through the vast Internet resource and would benefit if assistance in accessing appropriate information could be made available.

Popular Internet Browsers such as the Netscape Navigator® and the Microsoft Internet Explorer® provide some of content screening. However, this screening is generally limited only to Web Sites and typically involves several levels of setup interaction on the part of a parent or guardian to become active. Typically, once active, the content screening is not user specific, thus where a parent might want to limit a child's access to some Internet content, the parent may not want all users limited in the same manner. Other solutions to content screening, for example stand alone solutions such as Surf Watch® or Net Nanny®, while also effective at limiting access to undesirable Web Sites, generally have the same limitations with regard to other sources of Internet content as the browsers. Another limitation of the content screening provided by currently available solutions is that it is typically focused only on sex, violence and the like, and thus is directed primarily to protecting children. The need for content

screening, however, can extend beyond this current focus. For example, in some corporate environments where Internet access is desirable, often it would be more desirable if that access could be readily managed beyond the level that current Browser controls make available. In addition, it would be desirable if this content screening could be effected with little or no monitoring by corporate censors.

There is a need for Internet content regulation and/or screening that is not limited to only preventing access to undesirable Web Sites. This need for regulation extends to other sources of information available through the Internet such as Electronic Mail, Chat Rooms, News Groups and the like. In addition, it would be advantageous for this Internet content regulation to be available though an integrated solution, thus simplifying control of the criteria used for the screening process. It would also be desirable if this integrated solution could be tailored to meet a variety of needs, from those of young children to those of teens, young adults and others. Thus, it would be desirable if such an integrated solution could provide interactive assistance to help direct activities where appropriate within a friendly, engaging, graphical interface.

SUMMARY

An all-in-one Web browser, sites directory, multimedia e-mail, chat rooms and entertainment environment is provided that is combined with readily managed protocols for providing content screening and/or regulation of information available through the Internet. In some embodiments, at least some of these protocols are incorporated within the software that controls the all-in-one environment. In embodiments of the present invention, a graphical interface is provided that provides a user with interactive assistance for using the all-in-one environment's functions, for example, accessing information from a Web Page or Search Engine. Some embodiments in accordance with the present invention encompass a Rocketship browser that cruises cyberspace for exciting topics of interest. Web sites, and other functions, are accessed through the Rocketship's cockpit control panel and viewed through a view port. In this manner, a user is provided with an essentially three-dimensional (3-D) environment. An interactive agent is provided within the Rocketship environment to assist users with both spoken and/or written directions. The agent thus helps to enhance an experience that is both entertaining and instructive, while allowing for more complete access to all features and functions of the environment. In

some embodiments, instruction is enhanced through a point-and-click lookup feature. Thus, the user can point-and-click on a word displayed in a Web Page and be provided with a choice of methods to get additional information about the word, such as looking up the word in a dictionary, thesaurus, encyclopedia or the like.

In some embodiments, control features such as depressible buttons are shaped in accordance with their function and/or employ audio messages or sound effects. Additionally, in some embodiments these depressible buttons are larger than those found in standard Web browsers to facilitate their selection. In some embodiments in accordance with the present invention, representing at least some of the depressible buttons as rotatable arrays of such buttons enhances the 3-D feel of the environment. Thus, in addition to enhancing the feel of the environment, in this manner, an unlimited number of buttons may be provided for the selection of, for example, favorite places to visit.

In some embodiments of the present invention, maintaining lists, or other data structures, to identify locations that can be visited or contacted enhances the screening function. Data structures can also be made available to identify other individuals for the exchange of Electronic Mail and/or for contact with in Chat Rooms or the like. In

some embodiments in accordance with the present inventions, some or all of these lists are maintained locally with respect to the user, and in some embodiments one or more remote locations are employed for list storage.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention may be better understood, and its numerous objects, features, and advantages made apparent to those skilled in the art by referencing the accompanying illustrations. For simplicity and ease of understanding, common numbering of elements is employed where an element is the same in different illustrations.

FIGs. 1-13 are screen captures that depict features of an embodiment in accordance with the present invention; and;

FIG. 14 is a simplified flow chart depicting then manner in which screening and/or filtering aspects are applied within an embodiment in accordance with the present invention.

DETAILED DESCRIPTION

The following is a detailed description of illustrative embodiments of the present invention. As these embodiments of the present invention are described with reference to the aforementioned illustrations, various modifications or adaptations of the methods and

or specific structures described may become apparent to those skilled in the art. All such modifications, adaptations, or variations that rely upon the teachings of the present invention, and through which these teachings have advanced the art, are considered to be within the spirit and scope of the present invention. Hence, these descriptions and drawings should not be considered in a limiting sense, as it is understood that the present invention is in no way limited to only the embodiments illustrated. For example, while FIGs. 1-14 illustrate an embodiment in accordance with the present invention that is directed to children, other embodiments can be directed to adult users. For example, in some embodiments of the present invention, content screening and or regulation is directed in a topical manner, such as all content related to a specific interest and related topics.

Referring now to FIG. 1, a welcome screen capture is shown for an embodiment in accordance with the present invention that is directed to children. As seen the overall environment 10 has a three-dimensional (3-D) feel with an essentially centrally located active window 12 surrounded by an angled left widow boarder region 14, an angled right window boarder region 16, a lower control array 18 and a tool bar 20. Also shown is animated agent 22, referred to in this environment 10 as Surf Monkey™. It will be noted that the 3-D feel of

environment 10 is enhanced by a variety of factors. For example, the inward angling of left and right widow borders 14 and 16, respectively, give depth to the rendering of environment 10. This feeling of depth is further enhanced by the perspective rendering of features within borders 14 and 16 as well as within lower control array 18. For example, the pronounced perspective rendering of buttons 24, 26 and 28.

FIGs. 2, 3 and 4 are each a screen capture depicting a list of Guided Tour options available to a user after selection of Rocketship Tour button 30 (FIG. 1). The aforementioned figures serve, collectively, to illustrate animation of agent 22 in some embodiments of the present invention. Thus, comparing each of FIGs. 2-4 to one another, it is readily seen that agent 22 is positioned differently within each screen capture. As each of FIGs. 2, 3 and 4 were created differing from the other only in time sequence of the screen capture, the differing positions of agent 22 are representative of the aforementioned animation.

In FIG. 5, another screen capture showing the result of selecting Uniform Resource Location (URL) Transport 32 from tool bar 20 (FIG. 4) and opening URL data entry region 34. As seen, agent 22 has yet another configuration and essentially extends an arm 23 to point

toward data entry region 34. This new configuration of agent 22 serves to help confirm the user's selection. It will also be appreciated that extended arm 23 is depicted larger than other portions of agent 22 thus enhancing the 3-D look and feel of environment 10. As seen for well-known Web Browsers such as Microsoft's Internet Explorer® or Netscape's Navigator®, URL data entry region 34 contains the URL of the current location. However, it should be apparent that data entry region 34 is larger than corresponding regions in the aforementioned well-known browsers. Thus, the size of URL region 34, and an accompanying Go button 35 is enlarged with respect to standard browsers and thus tailored for easy data entry and selection by a child.

Other features of environment 10 are also enhanced or tailored for children. For example, as shown in FIG. 6, adding a Web page to a listing of Favorites 36 is accomplished by selecting heart button 38 within left boarder region 14 while a Web Page 40 is within active window 12. Selected Web Page 40 is represented as a depressible button 34, that is a miniature representation of the actual page selected, as can be seen. In this manner, the identity of such favorite sites is enhanced for children, as each favorite site is identifiable from its appearance without the need for reading a title in a textual listing

of favorites. It should be noted that, adding a site to Favorites listing 36 is also accompanied by an audible confirmation of the selection and animated movement of agent 22 (not shown). For example, adding favorite site 40 invokes a kissing sound to confirm selection and agent 22 giving a "thumbs up" signal.

Turning now to FIG. 7, lower control array 18 acts both to provide control options for the use of environment 10, and to enhance the 3-D feel of environment 10. Thus, control array 18 is formed larger than either left or right border regions 14 or 16 to give the appearance that it is positioned closer to user than either border region 14 or 16. Lower control array 18 encompasses a main control array 42 and a supplemental array 44. Previously noted, perspectively rendered buttons 24, 26 and 28 are within supplemental array 44. Each button 24, 26 and 28 create an animated effect within active window 12. For example, briefly turning to FIG. 8, several "splats" 46 are seen within active window 12 as the effect of depressing button 26. It should be noted that in some embodiments in accordance with the present invention, depressing button 26 transforms the pointer into a splat (not shown) which can then be positioned by user to place splats 46 at one or more locations. Buttons 24 and 28 are used to create other animated effects within active window 12. Thus in some

embodiments, button 24 can cause active window 12 to shatter much in the manner of a glass plate, and button 28 can cause the appearance of a lightening bolt. It will be understood that these functions described for buttons 24, 26 and 28 are illustrative only and not meant to limit this or other embodiments of the present invention in any manner.

Returning to FIG. 7, main control array 42, much in the manner of the Rocketship environment 10 is intended to represent, contains the main Web navigation controls for active window 12. In standard browsers, these controls are all generally found on the tool bar among a variety of other controls. Advantageously, these controls are positioned in a readily accessible central location that enhances the Rocketship feel of environment 10. It will be noted that each control within main control array 42 is represented in a manner that indicates its function. Thus stop button 48 has the shape of a stop sign, home button 50 depicts a picture of a house, forward and back buttons 52 and 54, respectively, are forward and backward pointing triangles and help button 58 is a question mark. Additionally main control array 42 has previously mentioned Rocketship Tour button 30 and a word lookup button 62.

Right-angled region 16 of FIG. 7 illustrates another advantageous feature of some embodiments of the present invention. Comparing the appearance of region 16 in FIG. 7 to that in FIGs. 6 and 8, it can be seen that depressible buttons 64 and 66 of region 16 are partially rotated. Buttons 64 and 66 show the content of FIG. 6 changing to the content of FIG. 8. In this manner Favorite listings 36 as well as listings of Hot Spots 68, Search Engines 70 and Sponsors 72 can provide many more choices than can be displayed at one time without changing the 3-D look and feel of environment 10. In addition, by providing rotatable buttons for listings 36, 68, 70 and 72, such buttons can retain their appearance and hence will advantageously remain easily identifiable.

In some embodiments in accordance with the present invention, selecting Guest Feature 60 (FIG. 1) opens a Logbook page 74 in active window 12 as shown in FIG. 9. Logbook page 74 is directly linked to a control site (not shown) that keeps the content of page 74 current. For example, date 76 indicates that page 74 was displayed on May 18, 1999 and an Entertainment region 78 provides a listing of upcoming events, as seen. In addition to providing current information in a visual manner, agent 22 interacts with a user while page 74 is displayed in active window 12. Thus, agent 22 displays, in cartoon

balloon 80, a message linked to current information and speaks the message at essentially simultaneously with each word's display within cartoon balloon 80. In this manner the interface for a young child just learning to read is enhanced. It should also be understood that other embodiments in accordance with the present invention could also take advantage of the interaction of agent 22 with the information displayed on a page displayed in active window 12. For example, in an environment (not shown) directed towards visually impaired users, having an agent that can speak the information provided on an active page, such as a Web Page or Email, is advantageous. The agent also works interactively with the content screening filtering system to avoid saying words that are offensive.

Some embodiments in accordance with the present invention encompass a Word Search feature. Selecting Word Search button 62 transforms the pointer (not shown) and allows for subsequent selection of a word from a page within active window 12. For example, selecting "Menace" from Entertainment region 78 opens Word Search Page 82 in active window 12 as depicted in FIG. 10. As seen, agent 22 interacts with user by displaying and speaking the text within Second Cartoon Balloon 84 to indicate which word was selected from the previous page. As seen, user can select any of the variety of lookup

tools provided to find additional information about the selected word. Thus, where a Thesaurus option is selected, FIG. 11 shows that user is linked to an on-line Thesaurus 86 within active window 12. Advantageously, the selected word is automatically passed to the new page as indicated in Go To data regions 88. It will be appreciated that such a word lookup function is particularly advantageous to some users, for example children.

As previously mentioned, embodiments in accordance with the present invention can provide screening and/or regulated access to information and other forms of functionality accessible on the Internet. Embodiments in accordance with the present invention incorporate some of this control and regulation function within the software that controls aforementioned all-in-one environment 10 (FIG. 1) and access other control and regulation functions directly from predetermined Internet based sources. Selection of a variety of supervisory functions and technical information is available via drop-down menu 90 shown in FIG. 12. For example, where ParentalControl 92 is selected, Supervisor Control page 94 appears overlying active window 12 (not visible) as depicted in FIG. 13. In addition, some embodiments of the present invention provide a security agent 96 to assist selection and instruct in the use of the various supervisory options available. For

example, agent 96, known as Cybot™, is shown adjacent check boxes 98, which provide for blocking access to Email and Chat functions, subsequent to an audio explanation of the use of each check box 98. Access to and use of the Email and Chat functions can be controlled in various other ways in addition to content screening as previously described. For example, in some embodiments in accordance with the present invention, sending and/or receiving Email is limited to a specific list of members. Alternatively, in some embodiments sending and/or receiving Email is blocked for a list of specific users and more general access permitted. In a similar manner, some embodiments of the present invention limit access to the Chat function with lists similar to those described for the Email function. In addition to limiting the Chat function through the use of lists of users, some embodiments of the present invention also limit access to specific Chat Rooms. Thus, one or more lists of specific Chat Rooms are employed to allow and/or restrict entry to a Chat Room.

Turning now to FIG. 14, a simplified flow chart is provided to illustrate the manner in which content screening and or access is implemented in some embodiments of the present invention. It will be understood that FIG. 14 is shown for illustrative purposes only and has been greatly simplified for ease of explanation. For example, a

client can have access to a variety of Internet resources such as Web Pages, Email, Chat Room, Search Engines and the like, only Call Web Page 102, Send/Receive Email 104 and Enter Chat Room 106 are shown in FIG. 14.

Access to all-in-one environment 10 (FIG. 1) begins with a local login 100 at user's computer (not shown). Generally, such a login 100 encompasses entering a user name and password. In some embodiments of the present invention, the validity of these entries is generally checked against values stored in a local database 110 and if correct User Status 112 is verified by accessing a Remote User ID Database 113 after Internet connection is completed. In this manner, Internet access is only begun if the User ID is correct at the local level and unnecessary connections are avoided. Generally once User Status 112 is verified as either a Supervisory User 114 or a Client User 130, the appropriate functions become available. While FIG. 14 depicts that Supervisory User 114 does not have access to Client Functions 132, this is a design choice only. Thus, in some embodiments in accordance with the present invention, Supervisory User 114 can access all Client Functions 132, while in other embodiments only some Client Functions 132 are available to Supervisory User 114. However, no embodiment of the present

invention allows a Client User 130 access to Supervisory Functions 116.

Supervisory Controls 116 include a variety of Internet access and content regulation functions. Thus, for example, Supervisory User 116 can select ParentalControl 92 from pull-down menu 90 (FIG. 12) and make modifications to the settings of the control functions for Email and Chat Room access as shown in FIG. 13. In other embodiments in accordance with the present invention, Supervisory User 116 can modify other settings; thus it will be understood that Update Supervisory Settings 118 encompasses all such modifications. Once User 116 has completed updating each desired setting, one or more Local Databases 120 and Remote Databases 122 are updated to reflect the modification. Supervisory User 116 can continue with additional modifications or continue to LogOut 200 at Update Complete 124 decision point, as indicated.

Client User 130 only has access to Client Functions 132. For example, FIG. 14 illustrates three client functions, Call Web Page 102, Send/Receive Email 104 and Enter Chat Room 106. As each of Client Functions 132 can have unique Supervisory Settings 118, once a specific function is called, access to that function is verified at an Access Allowed 134 decision point. Generally, Checking Local and

Remote Databases 136 for the specific access information required makes this decision. It will be understood, that while access control to a user function may at times involve a simple yes or no, at other times such access encompasses other controls. For example, once access to Send/Receive Email 104 is granted, additional controls such as restricting Email to a list of pre-approved "Buddies" and/or content screening of incoming Email can be applied so that offensive words are filtered from the email. Thus once Client User 130 gains Access 138, Local and/or Remote Databases 136 will generally continue to be accessed to enable these additional controls. Generally, the data accessed from Databases 136 is used in concert with functions embedded within all-in-one environment 10 (FIG. 1) to effect these additional controls. In addition, in some embodiments in accordance with the present invention, real-time control and monitoring of Client User 130 can be effected. For example, where child Client User 130 is granted access to Chat Room 106, an adult monitor may be present at a remote location to screen the activity of User 130 and others. Client User 130 is not limited to one accessing a single function. Thus, where access to a specific function is not allowed at Access Allowed 134 decision point, or when User 130 has finished using the function previously selected, a LogOut/Other Function 140 decision

point is reached. In this manner, User 130 is appropriately directed to LogOut 200 or Client Functions 132.

By now it should be realized that a system and method of an all-in-one Web browser, sites directory, multimedia e-mail, chat rooms and entertainment environment has been described that provides easily managed content control and regulation of a user's access to the Internet. As described, the all-in-one environment can be tailored to meet a variety of needs from those of young children, as indicated in illustrative FIGs. 1-13, to other users through the use of other environments and agents. Thus the use of an agent can provide both visual and audible prompts to adult users, e.g. visually impaired or elderly users, that advantageously provides an enhanced Internet experience over that possible with more traditional environments. In addition, it has been found that for young users, that the animation and interactivity of the agent allows the agent to essentially become a friend. Again advantageously providing an enhanced Internet experience for the user. Also content control and screening, as described, that can make use of both local and remote data structures in combination with embedded functionality is advantageous for Corporate Intranet and Internet users where management is seeking

an easily maintained method of limiting Internet access and/or content control.

Finally, Section 1.14 of SurfMonkey Design Documentation (pages A1-A3), Surf Monkey Fact Sheet (pages B1-B5), MediaLive Surf Monkey Technical Backgrounder of June 1998 (pages C1-C10), Surf Monkey Press Release 1 of June 8, 1998 (pages D1-D9), Surf Monkey Press Release 2 of June 19, 1998 (pages E1-E2) and Surf Monkey Press Release 3 of February 10, 1999 (pages F1-F2) are incorporated herein.

We Claim:

1. A system for accessing and viewing information on the internet comprising:

   a web browser; and

   an animated agent programmed to interact with features of said browser.

2. The system of Claim 1, wherein said animated agent's interaction comprises displaying words in a textual manner while essentially simultaneously speaking the displayed words.

3. The system of Claim 2, wherein displaying words in a textual manner comprises displaying words within a cartoon balloon.

4. The system of Claim 1 comprising programming to send and receive electronic mail wherein said animated agent interacts with said electronic mail programming.

5. The system of Claim 1 comprising programming to access and communicate with chat rooms wherein said animated agent interacts with said chat room access and communication programming.

6. The system of Claim 1 comprising content access control programming.

7. The system of Claim 6 comprising a second animated agent, wherein said second animated agent is programmed to interact with said content access programming.

8. The system of Claim 6 wherein said content access programming comprises access to a local data structure encompassing locally set content access criteria and access to a remote data structure encompassing remotely set content access criteria.

9. An all-in-one environment of Internet/Intranet access comprising:

a first module for identifying a client user;

a second module for identifying a supervisory user;

a third module for creating or modifying local content access settings to Internet/Intranet resources and a local data structure for storing said settings, wherein said third module is not accessible for creating modifying local content access settings to said client user;

a fourth module for accessing one or more remote data structures having one or more remote content access controls to Internet/Intranet resources;

a fifth module for coordinating local control settings retrieved from said local data structure with said one or more remote content access controls, wherein said fifth module controls said client user's access to Internet/Intranet resources;

a first interactive agent to provide audible and visual prompts to said client user access said Internet/Intranet resources; and

a second interactive agent to provide audible and visual prompts to said supervisory user for creating said local content access settings.

10. The all-in-one environment of Claim 9 comprising an environment having a three-dimensional look and feel, wherein said three-dimensional look and feel is enhanced by animation of said first and/or second interactive agent.

SYSTEM AND METHOD OF A WEB BROWSER WITH INTEGRATED FEATURES AND CONTROLS

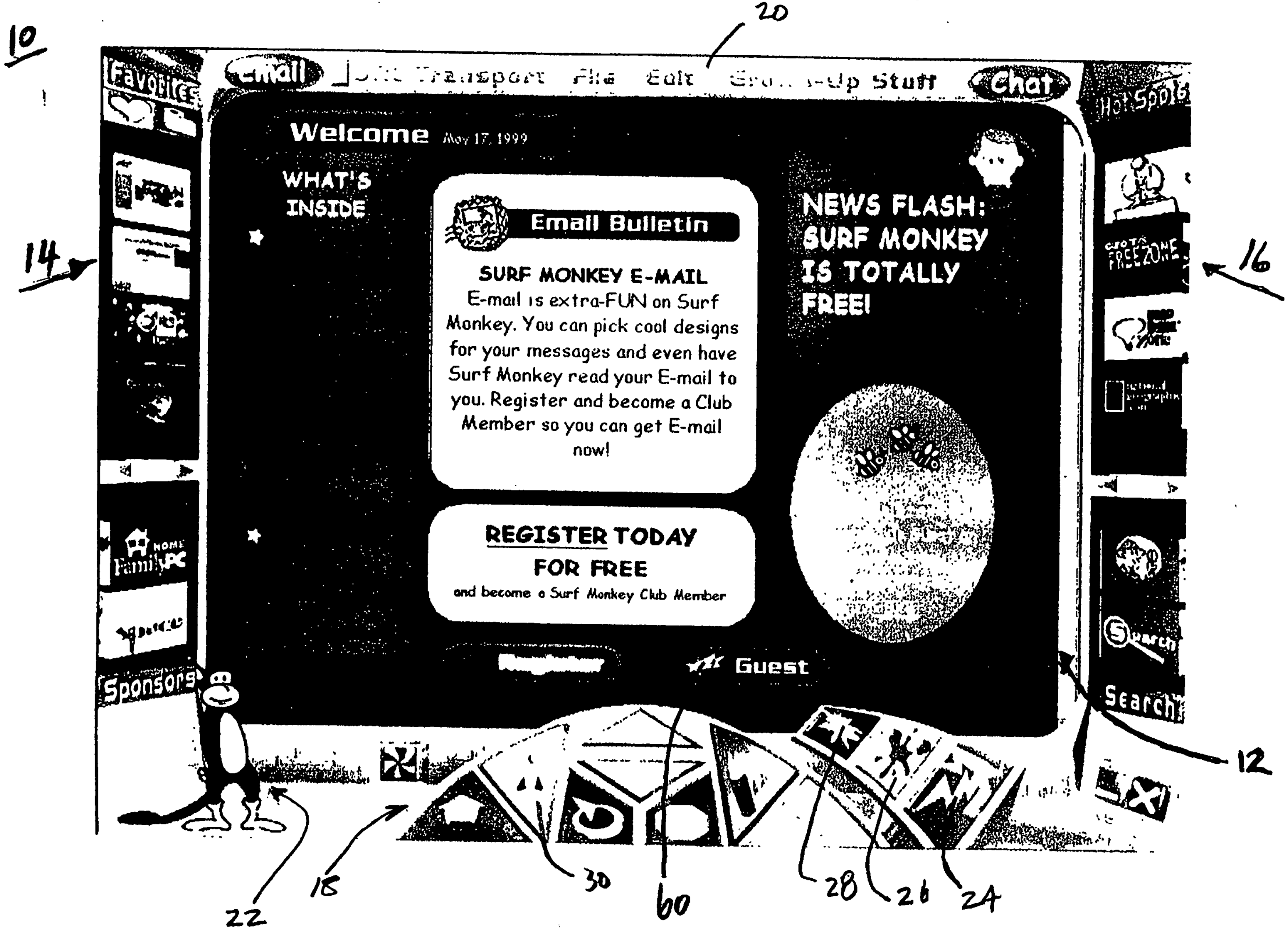
Fabrice Chupin
David Smith
Scott Jaroll
David Redkey

ABSTRACT

An all-in-one environment for Internet/Intranet access distinguishes between client users and supervisory users. Supervisory users are authorized to create and/or modify local content access settings to Internet/Intranet resources that are stored in a local data structure and/or a remote data structure. Client users are prevented from accessing these local content access settings. When a client user logs on, the all-in-one environment retrieves the local content access settings and connects to a predetermined remote site to retrieve additional content access control information. Modules embedded within the all-in-one environment coordinate local and remote control access settings to provide regulation, in the form of control and/or screening of the Internet/Intranet resources, of the content that the client user can access. The amount of regulation afforded is readily modified through the setting of local content access settings by a local supervisor and by the selection of the remote site(s) contacted for

additional content access control information. The all-in-one environment also encompasses one or more interactive agents to assist and/or entertain client users during Internet/Intranet access. In some embodiments of the present invention, the all-in –one environment is rendered to have a three-dimensional look and feel.

FIG. 1



Welcome May 17, 1999

WHAT'S INSIDE

Email Bulletin

SURF MONKEY E-MAIL

E-mail is extra-FUN on Surf Monkey. You can pick cool designs for your messages and even have Surf Monkey read your E-mail to you. Register and become a Club Member so you can get E-mail now!

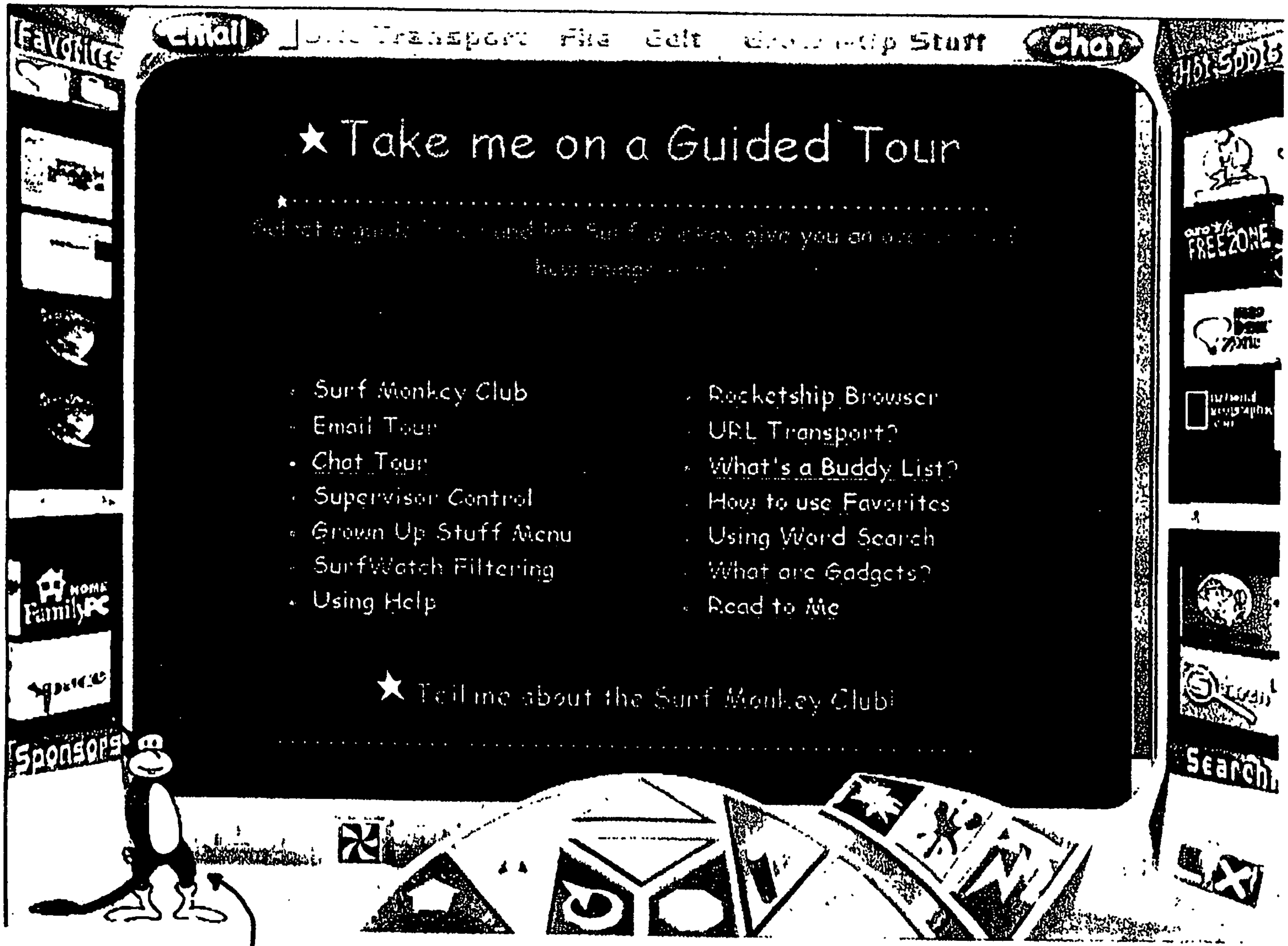
REGISTER TODAY FOR FREE

and become a Surf Monkey Club Member

NEWS FLASH: SURF MONKEY IS TOTALLY FREE!

Guest

FIG 2



★ Take me on a Guided Tour

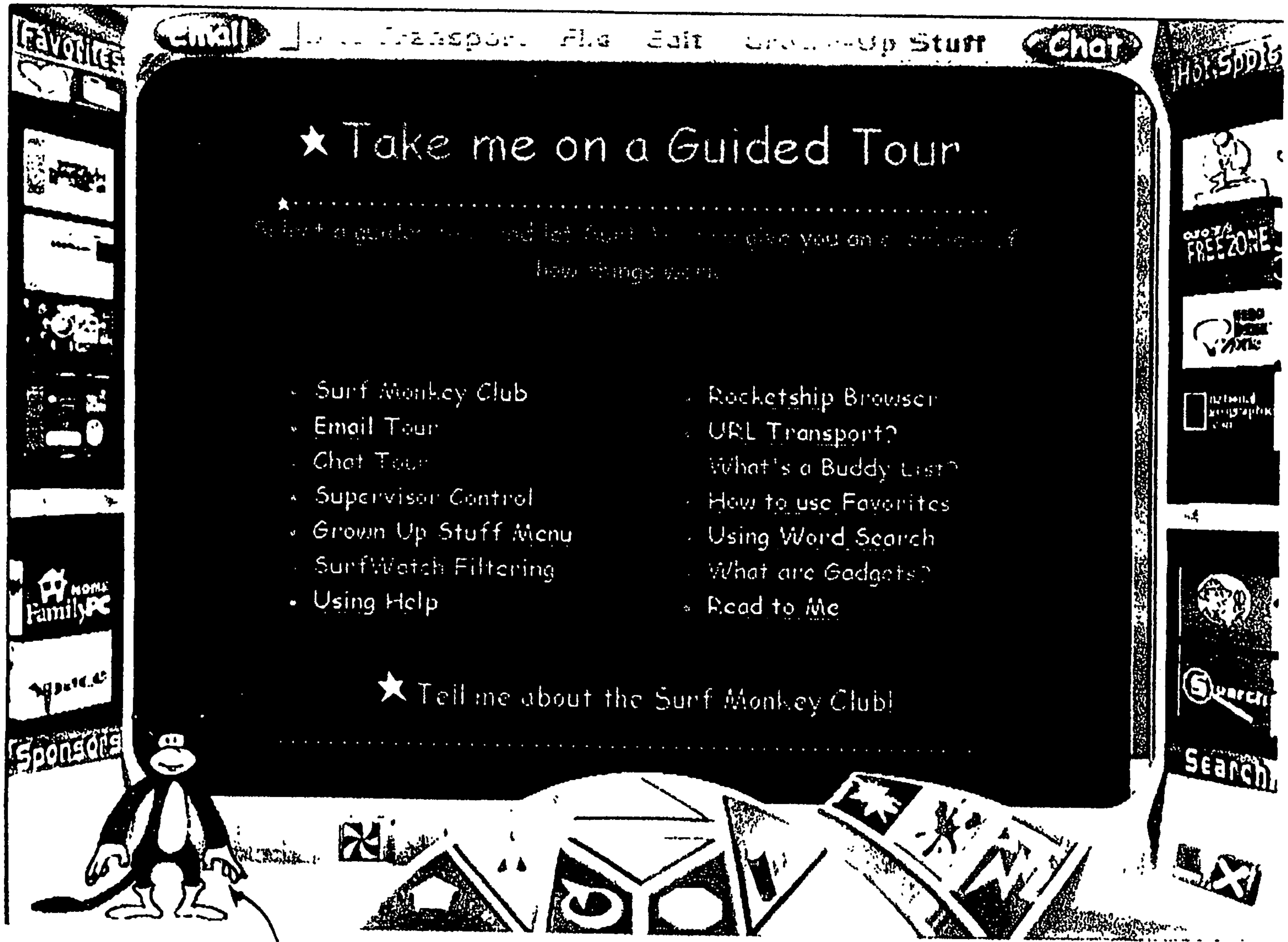
Select a guide [illegible] and let Surf Monkey give you an [illegible] how things [illegible]

- Surf Monkey Club
- Email Tour
- Chat Tour
- Supervisor Control
- Grown Up Stuff Menu
- SurfWatch Filtering
- Using Help
- Rocketship Browser
- URL Transport?
- What's a Buddy List?
- How to use Favorites
- Using Word Search
- What are Gadgets?
- Read to Me

★ Tell me about the Surf Monkey Club!

10

FIG 3



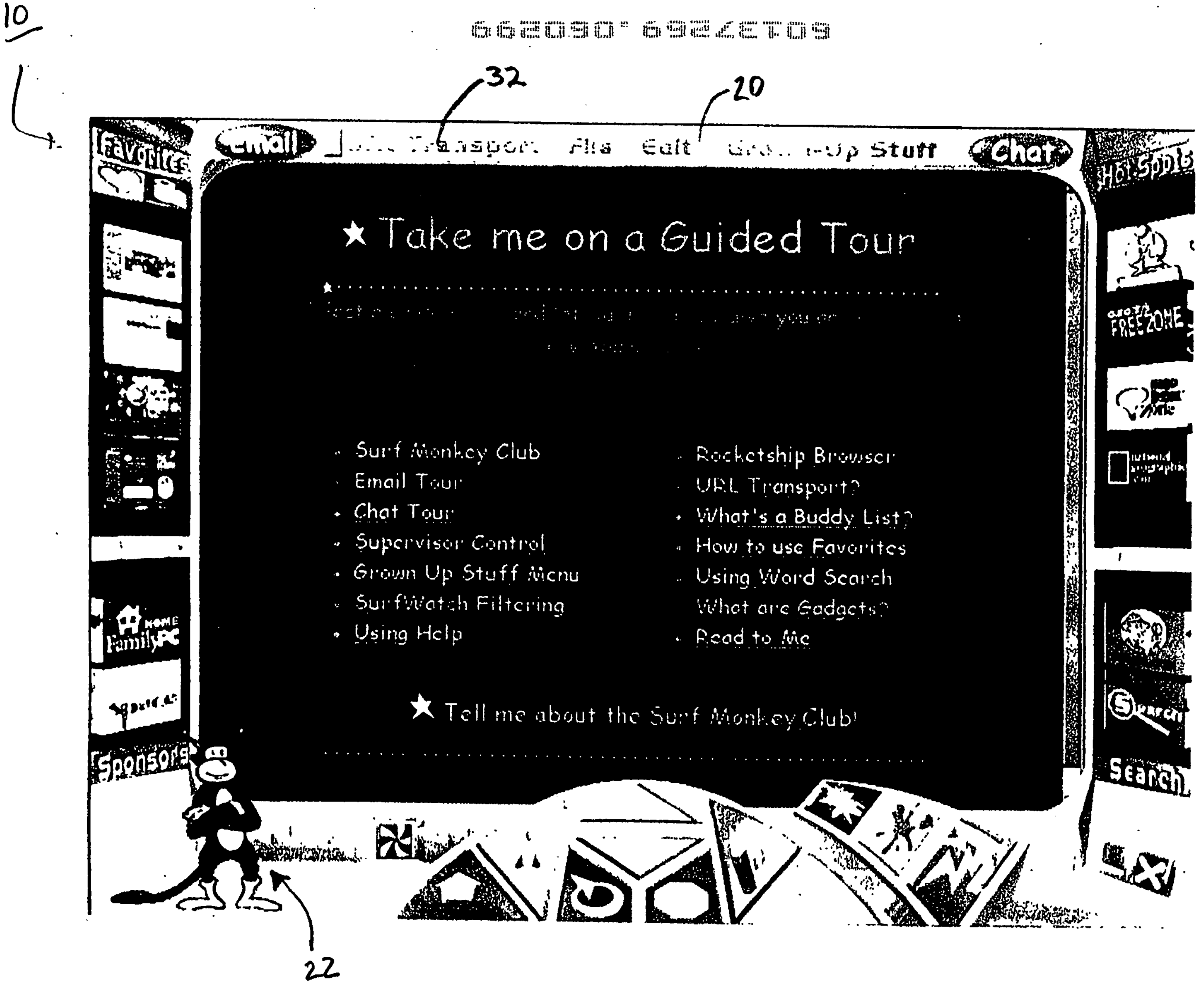
★ Take me on a Guided Tour

Select a guided [illegible] and let Surf [illegible] give you an [illegible] of how things work.

- Surf Monkey Club
- Email Tour
- Chat Tour
- Supervisor Control
- Grown Up Stuff Menu
- SurfWatch Filtering
- Using Help
- Rocketship Browser
- URL Transport?
- What's a Buddy List?
- How to use Favorites
- Using Word Search
- What are Gadgets?
- Read to Me

★ Tell me about the Surf Monkey Club!

FIG4

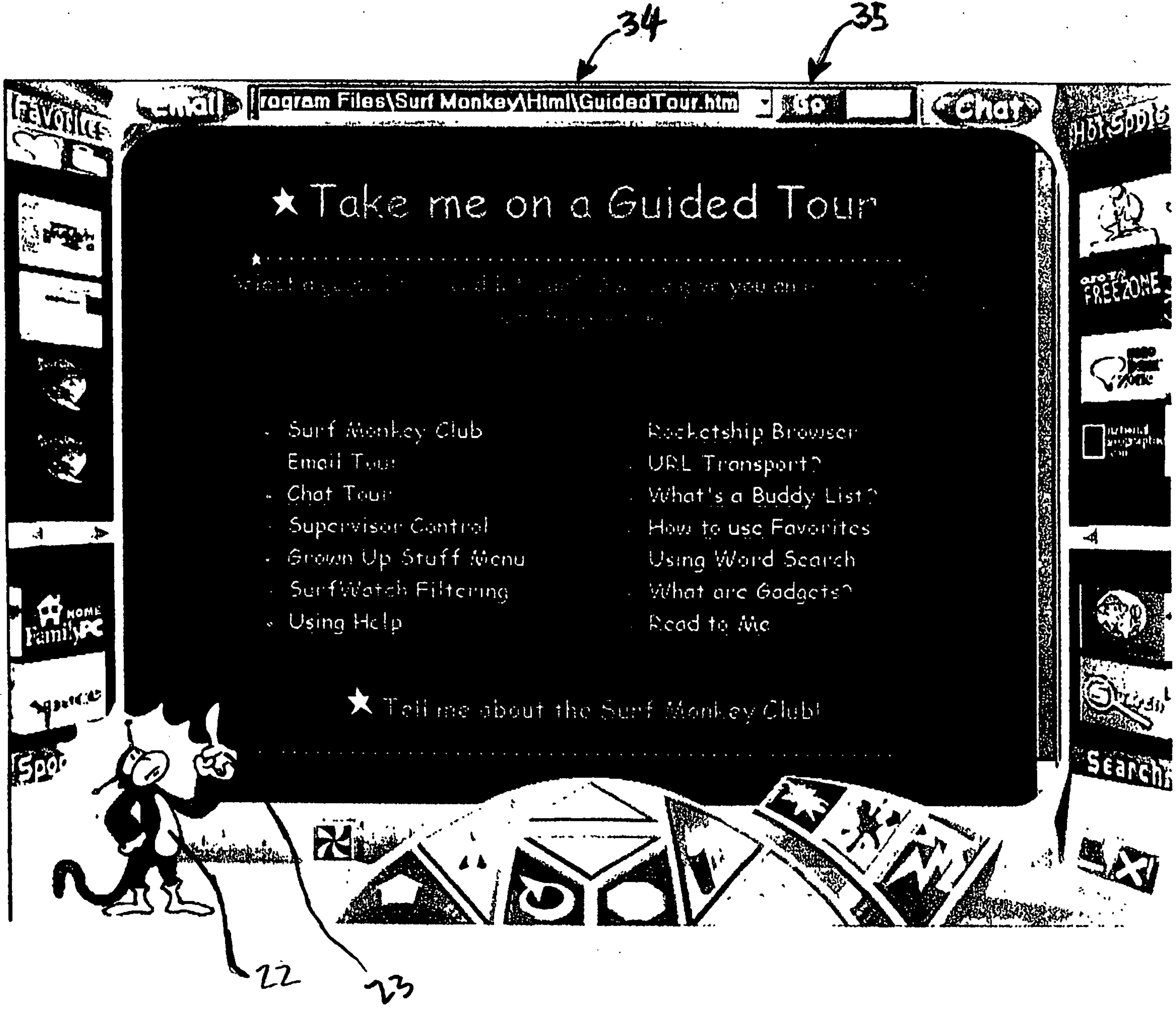


★ Take me on a Guided Tour

- Surf Monkey Club
- Email Tour
- Chat Tour
- Supervisor Control
- Grown Up Stuff Menu
- SurfWatch Filtering
- Using Help
- Rocketship Browser
- URL Transport?
- What's a Buddy List?
- How to use Favorites
- Using Word Search
- What are Gadgets?
- Read to Me

★ Tell me about the Surf Monkey Club!

FIG 5

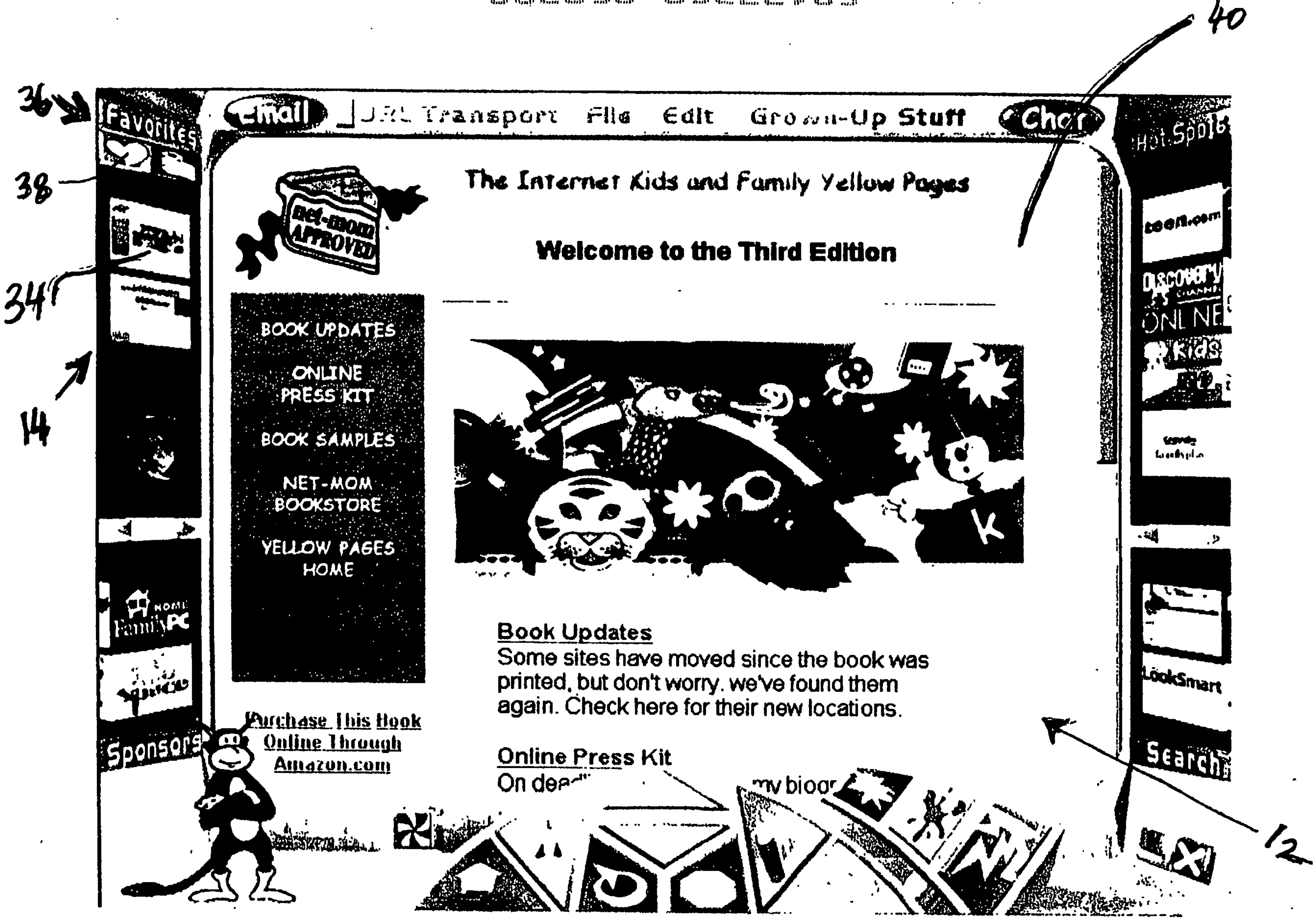


rogram Files\Surf Monkey\Html\GuidedTour.htm

★ Take me on a Guided Tour

- Surf Monkey Club
- Email Tour
- Chat Tour
- Supervisor Control
- Grown Up Stuff Menu
- SurfWatch Filtering
- Using Help
- Rocketship Browser
- URL Transport?
- What's a Buddy List?
- How to use Favorites
- Using Word Search
- What are Gadgets?
- Read to Me

★ Tell me about the Surf Monkey Club!



The Internet Kids and Family Yellow Pages

Welcome to the Third Edition

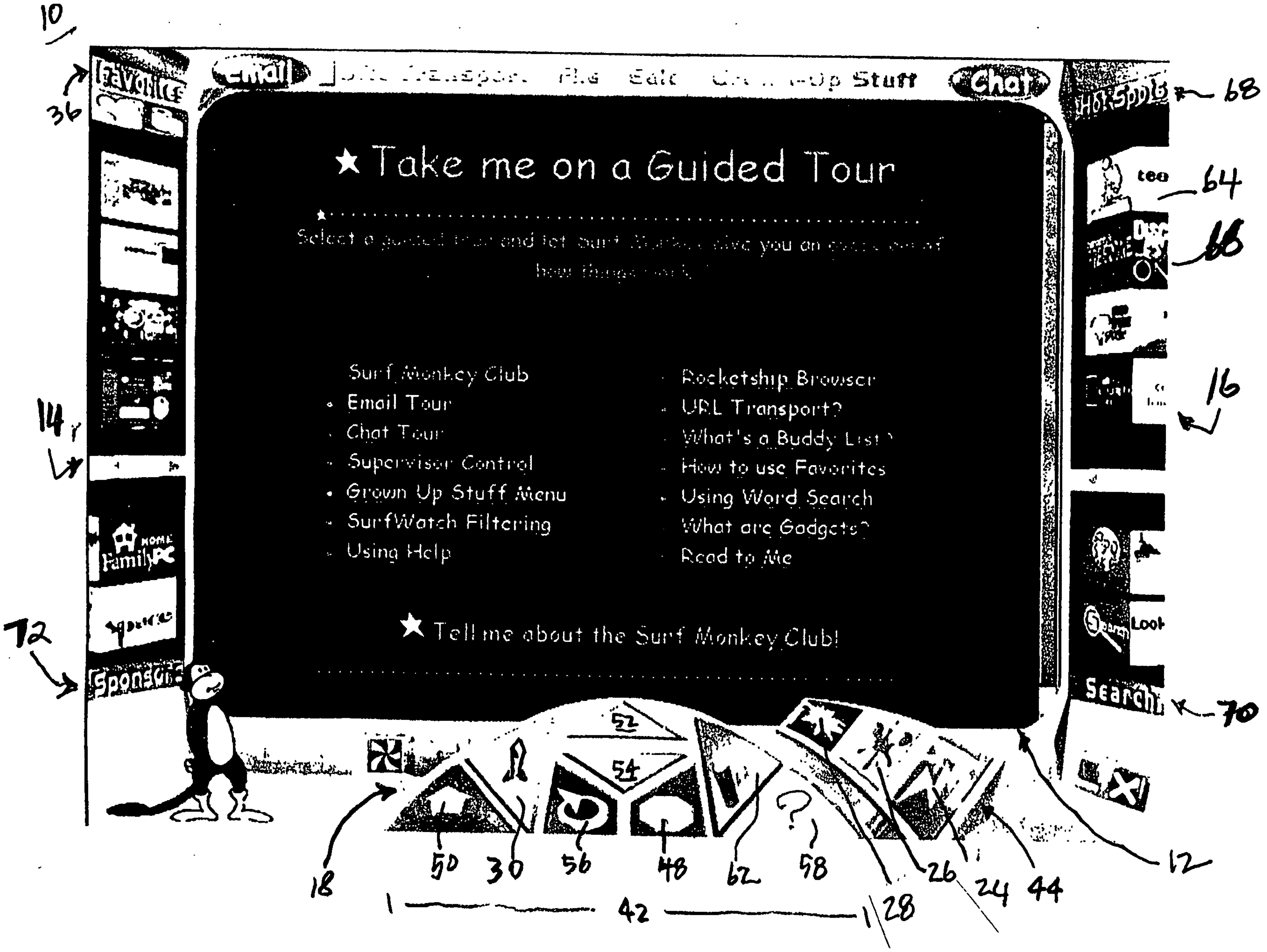
Book Updates
Some sites have moved since the book was printed, but don't worry, we've found them again. Check here for their new locations.

Online Press Kit
On dea my bioo

Purchase This Book Online Through Amazon.com

FIG 6

FIG 7



★ Take me on a Guided Tour

Select a guided tour and let Surf Monkey give you an [illegible] of how things work.

- Surf Monkey Club
- Email Tour
- Chat Tour
- Supervisor Control
- Grown Up Stuff Menu
- SurfWatch Filtering
- Using Help
- Rocketship Browser
- URL Transport?
- What's a Buddy List?
- How to use Favorites
- Using Word Search
- What are Gadgets?
- Read to Me

★ Tell me about the Surf Monkey Club!

Fig 8

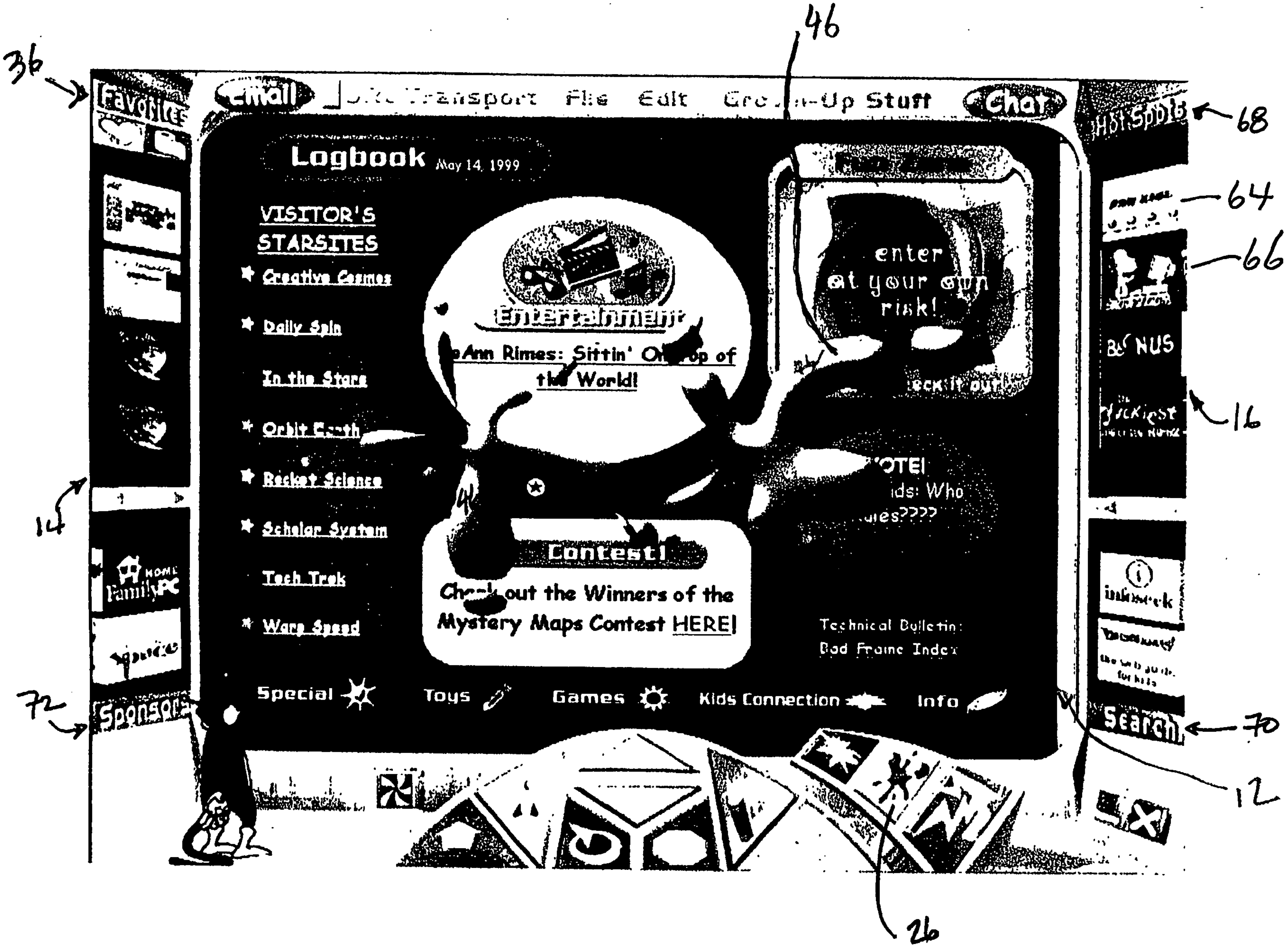

36
Favorites
Email
Transport
File
Edit
Grown-Up Stuff
Chat
68
HotSpots
46
Logbook May 14, 1999
VISITOR'S STARSITES
Creative Cosmos
Daily Spin
In the Stars
Orbit Earth
Rocket Science
Scholar System
Tech Trek
Warp Speed
Entertainment
Ann Rimes: Sittin' On Top of the World!
enter at your own risk!
check it out!
VOTE!
Contest!
Check out the Winners of the Mystery Maps Contest HERE!
Technical Bulletin: Bad Frame Index
64
66
BONUS
16
14
FamilyPC
infoseek
Special
Toys
Games
Kids Connection
Info
72
Sponsors
Search
70
12
26

FIG. 9

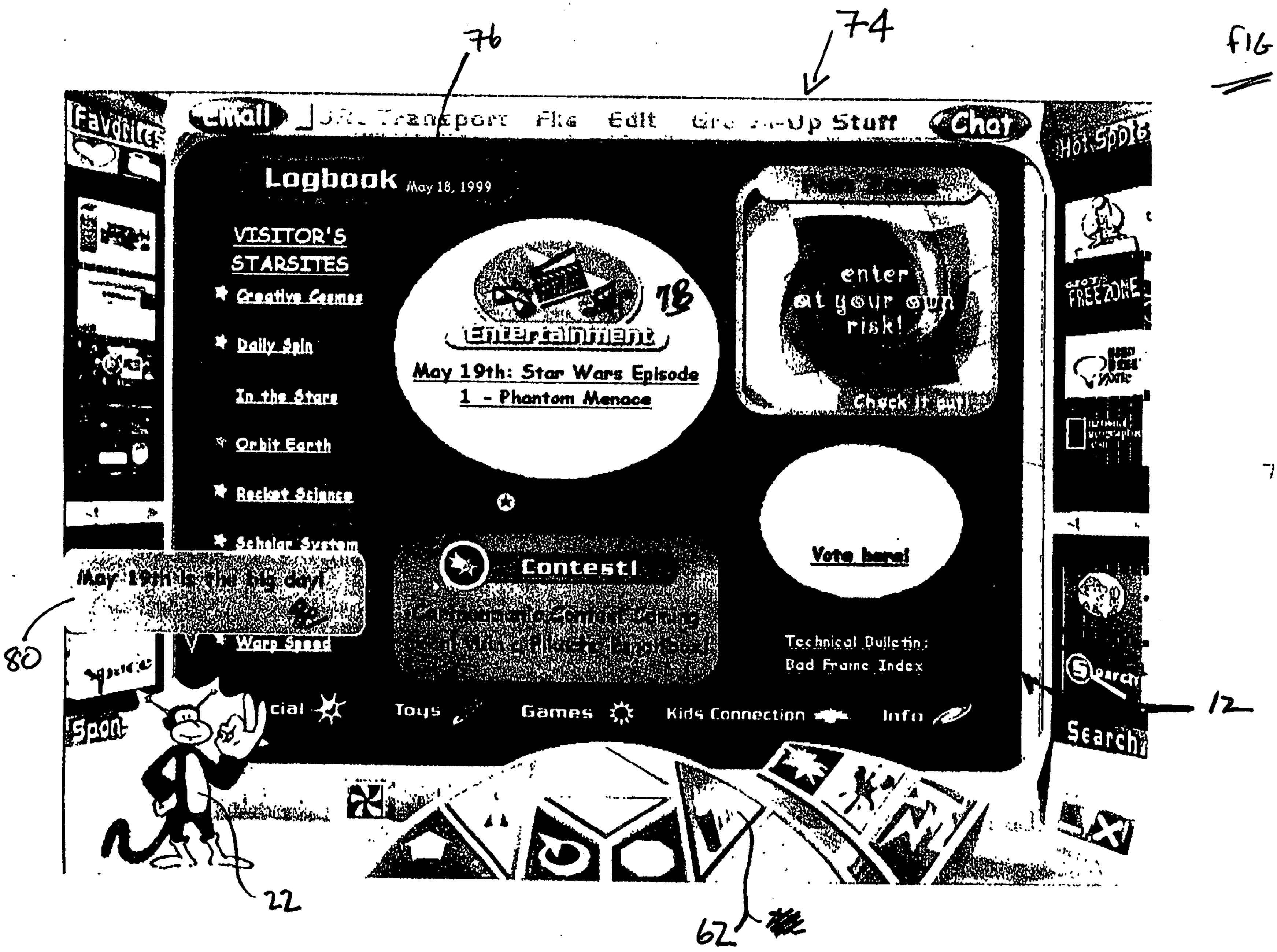
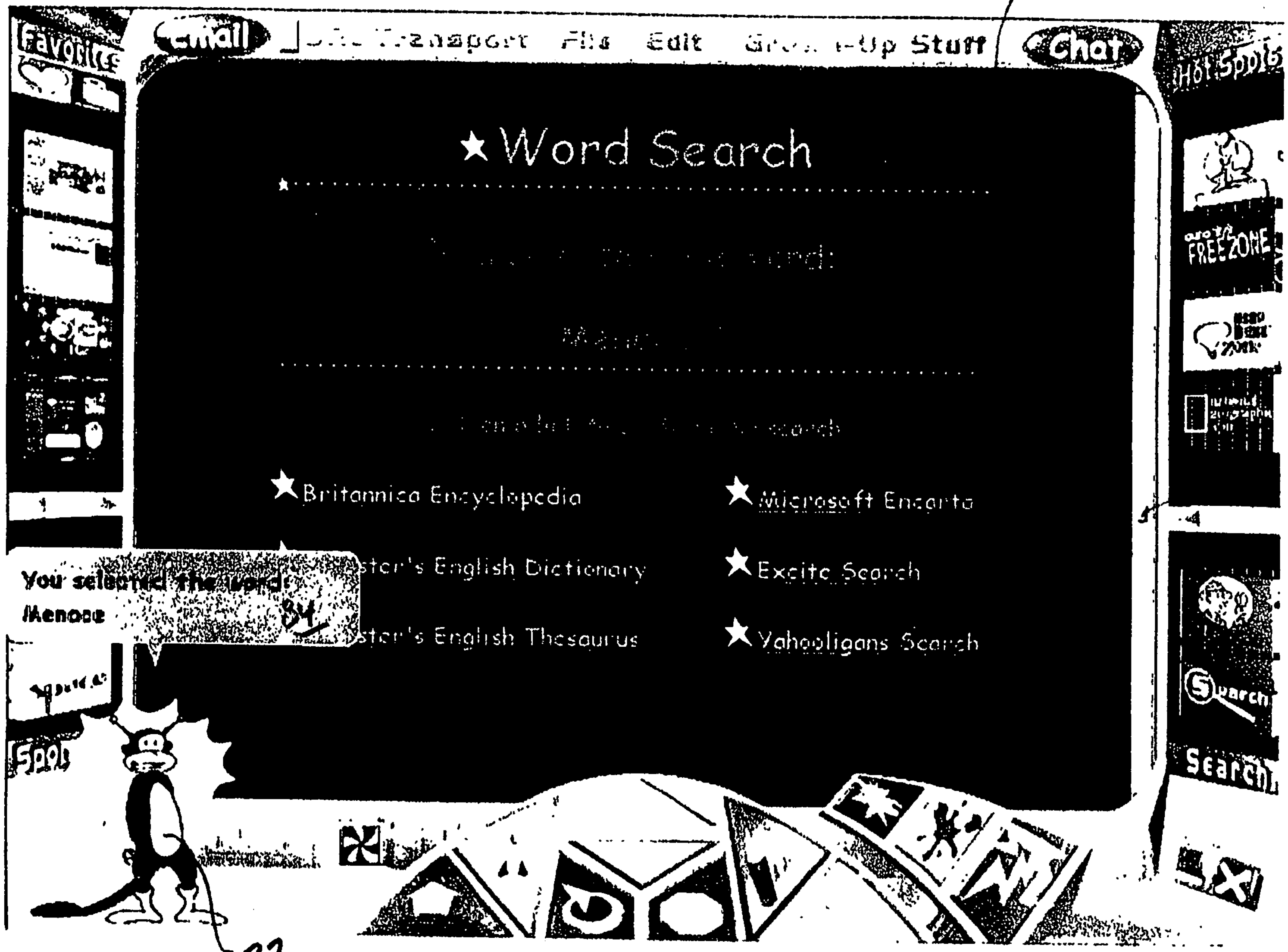

76
74
Email
URL Transport
File
Edit
Grown-Up Stuff
Chat
Favorites
Hot Spots
Logbook May 18, 1999
VISITOR'S STARSITES
Creative Games
Daily Spin
In the Stars
Orbit Earth
Rocket Science
Scholar System
Warp Speed
Entertainment
78
May 19th: Star Wars Episode 1 - Phantom Menace
enter at your own risk!
Check it out!
Contest!
Vote here!
Technical Bulletin: Bad Frame Index
May 19th is the big day!
80
Space
Spon
Social
Toys
Games
Kids Connection
Info
FREEZONE
Search
Search
12
22
62

FIG. 10



★Word Search

★Britannica Encyclopedia

★Microsoft Encarta

ster's English Dictionary

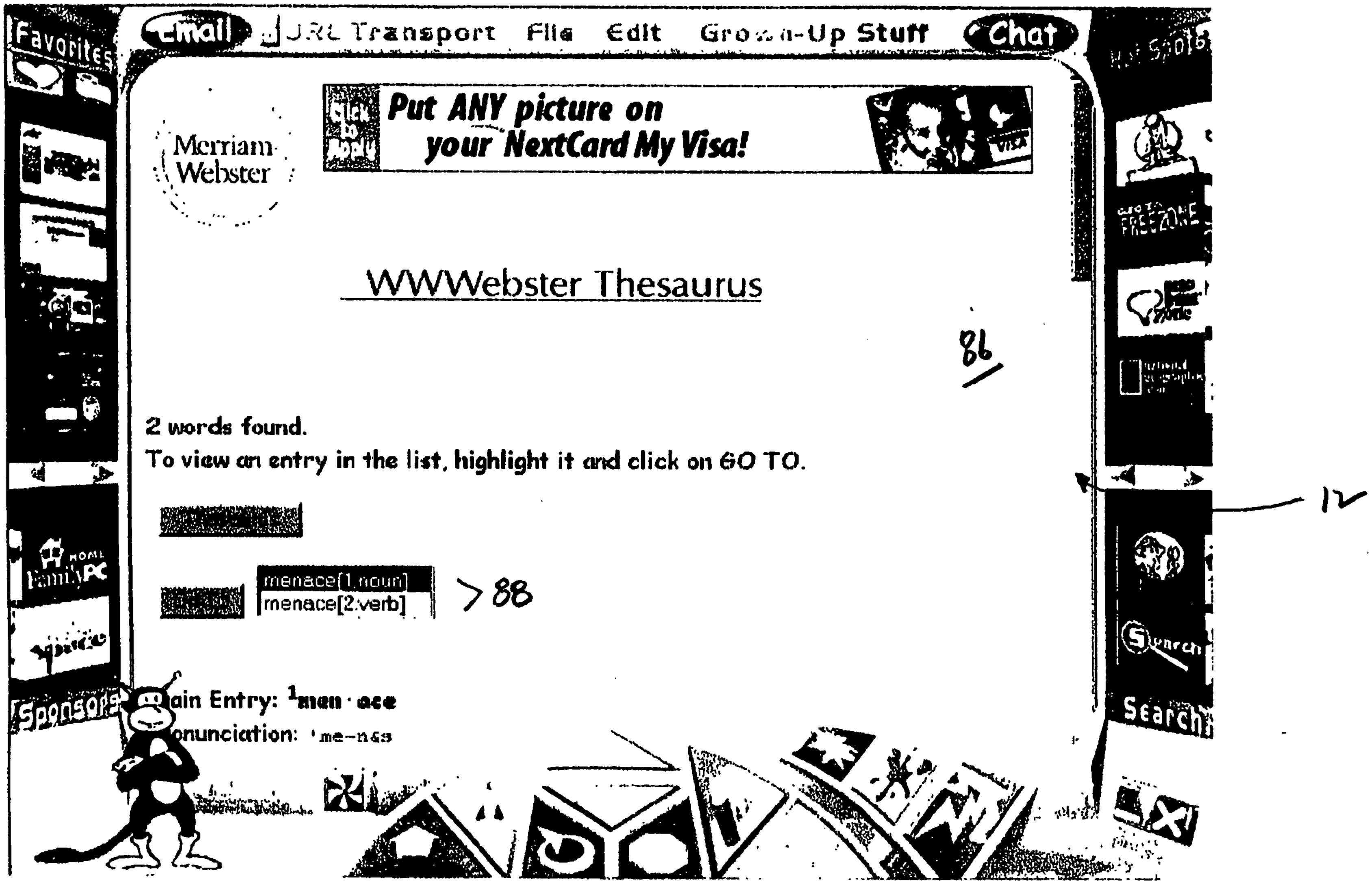
★Excite Search

ster's English Thesaurus

★Yahooligans Search

You selected the word:
Menace

FIG 11



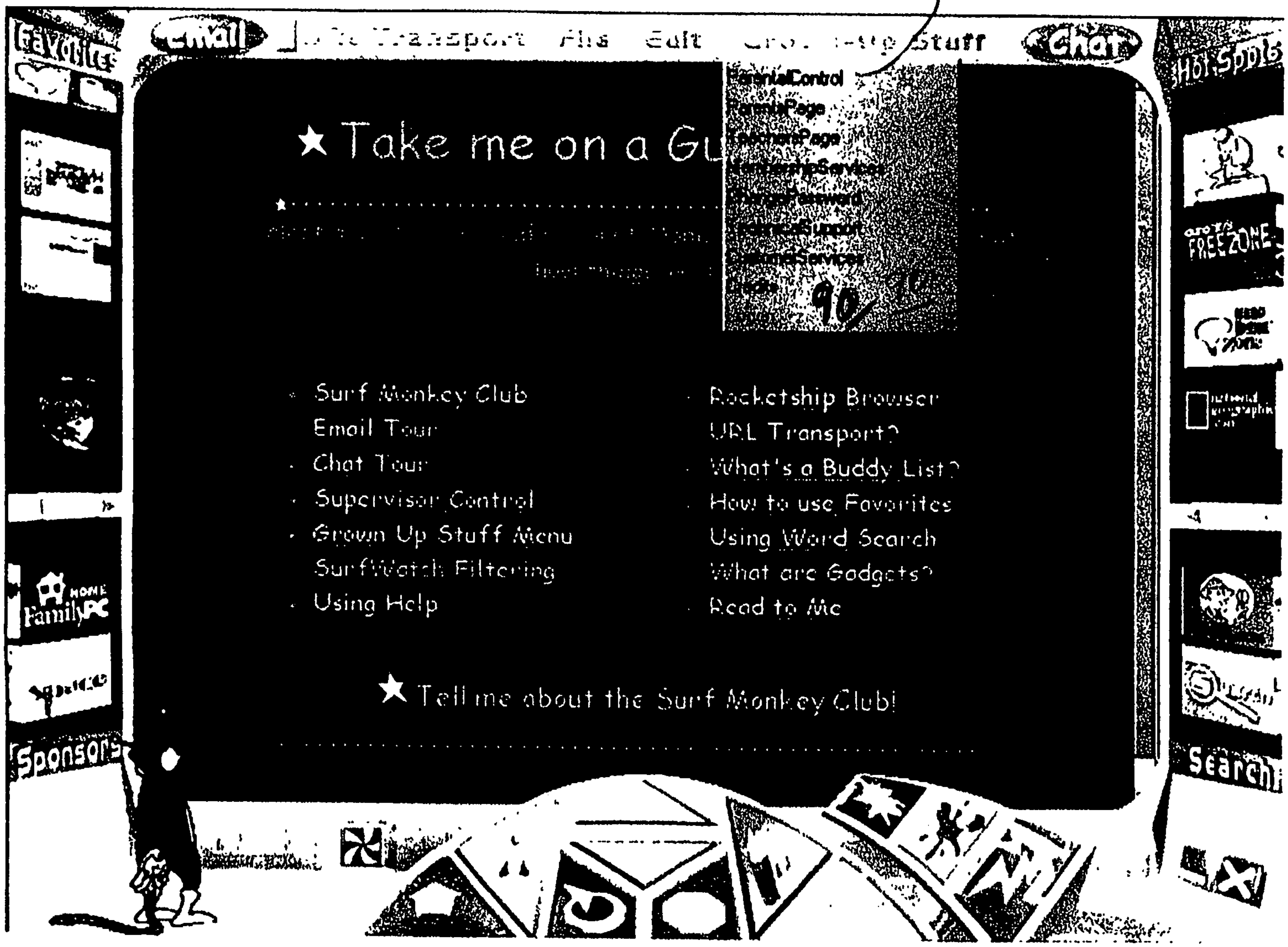
WWWebster Thesaurus

2 words found.
To view an entry in the list, highlight it and click on GO TO.

menace[1.noun]
menace[2.verb]

ain Entry: ^{1}men·ace
onunciation: 'me-nəs

FIG 12



★ Take me on a Gu

- Surf Monkey Club
- Email Tour
- Chat Tour
- Supervisor Control
- Grown Up Stuff Menu
- SurfWatch Filtering
- Using Help
- Rocketship Browser
- URL Transport?
- What's a Buddy List?
- How to use Favorites
- Using Word Search
- What are Gadgets?
- Read to Me

★ Tell me about the Surf Monkey Club!

Fig 13.

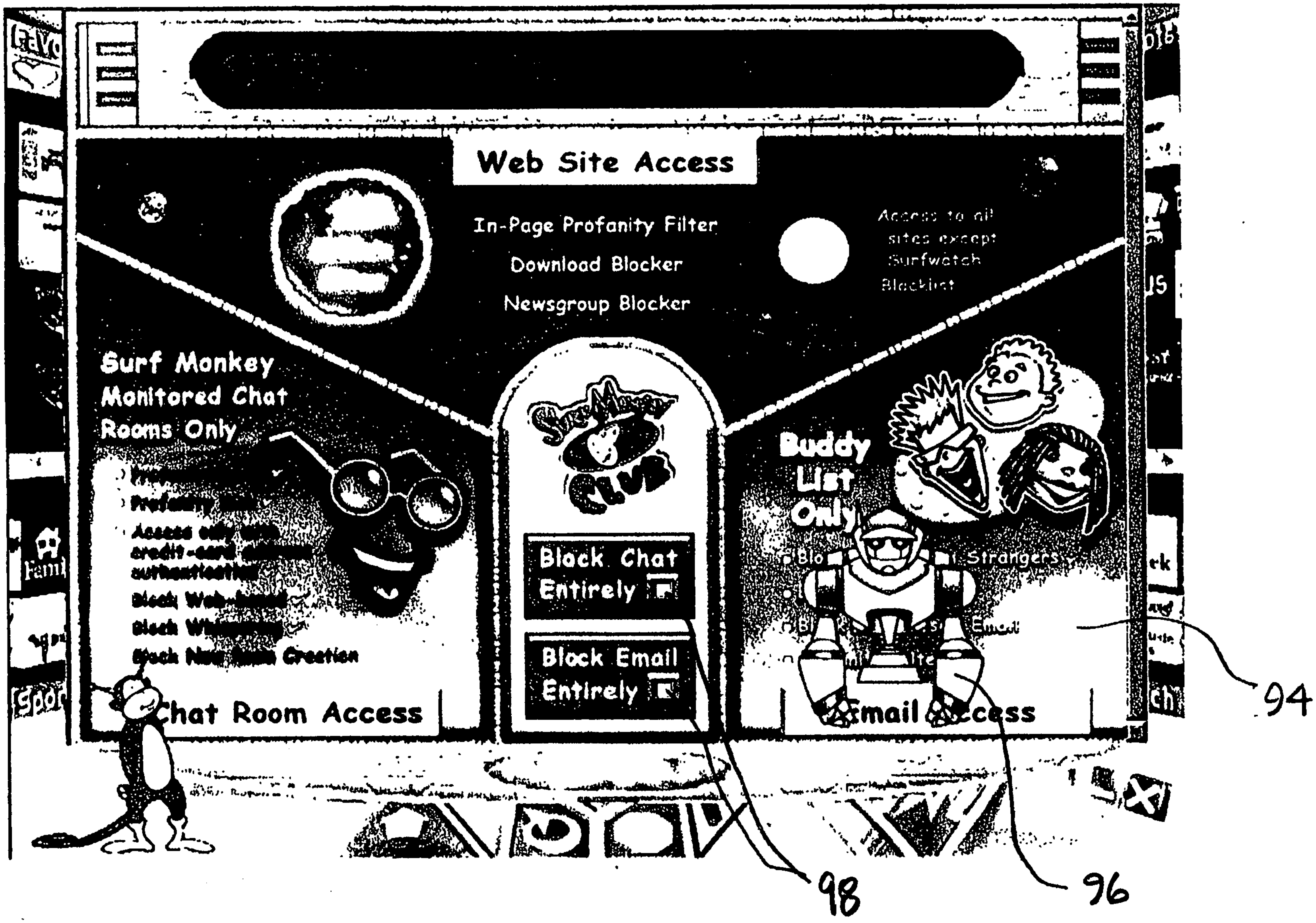
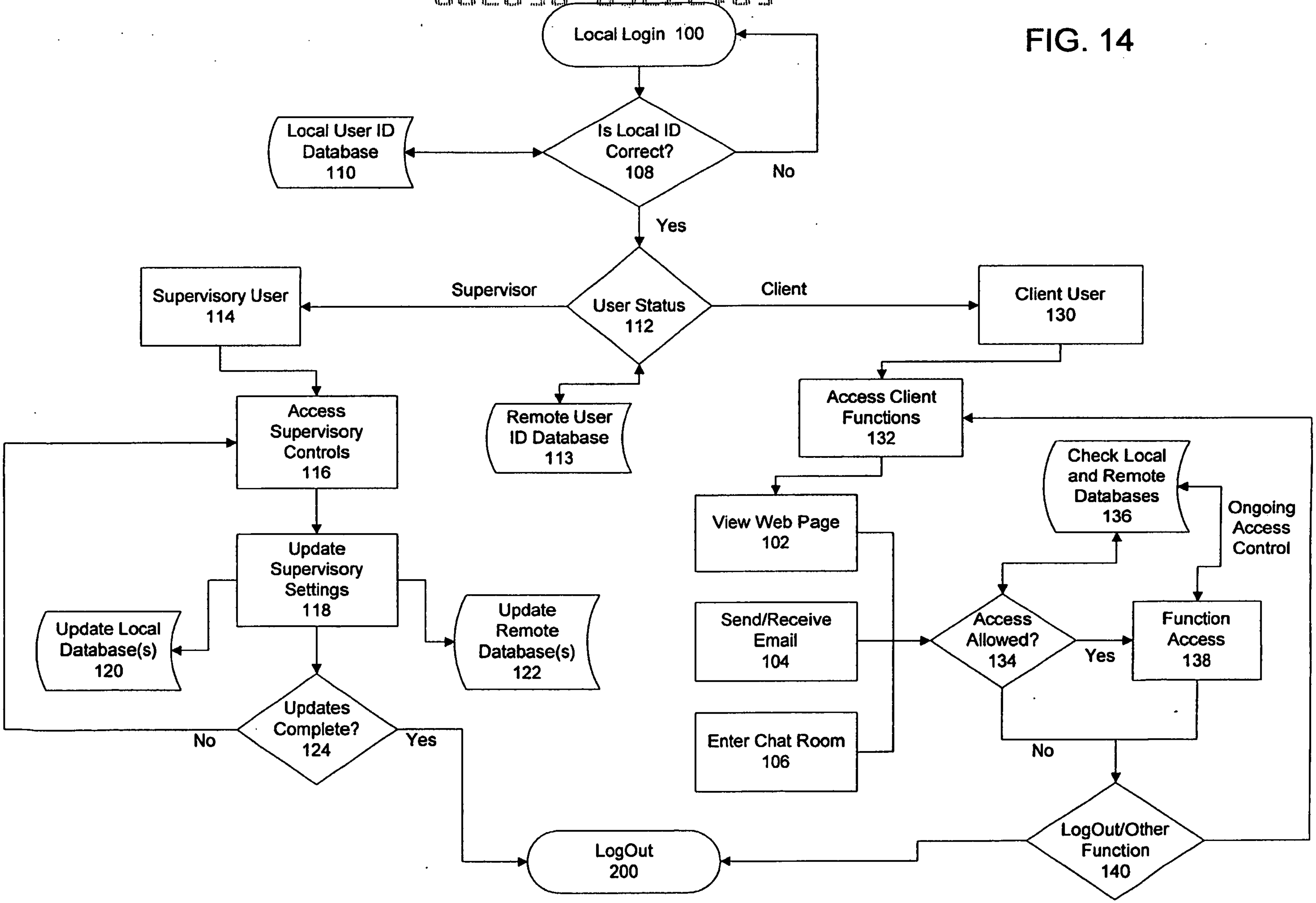

Web Site Access
In-Page Profanity Filter
Download Blocker
Newsgroup Blocker
Access to all sites except Surfwatch Blacklist
Surf Monkey Monitored Chat Rooms Only
Block Web-based
Block New Room Creation
Chat Room Access
Surf Monkey Club
Black Chat Entirely ☑
Block Email Entirely ☑
Buddy List Only
Strangers
Email
Email Access
94
96
98

FIG. 14


Local Login 100
Is Local ID Correct? 108
No
Local User ID Database 110
Yes
User Status 112
Supervisor
Client
Supervisory User 114
Client User 130
Remote User ID Database 113
Access Supervisory Controls 116
Access Client Functions 132
Check Local and Remote Databases 136
Ongoing Access Control
View Web Page 102
Update Supervisory Settings 118
Send/Receive Email 104
Access Allowed? 134
Yes
Function Access 138
Update Local Database(s) 120
Update Remote Database(s) 122
Enter Chat Room 106
No
Updates Complete? 124
Yes
No
LogOut/Other Function 140
LogOut 200